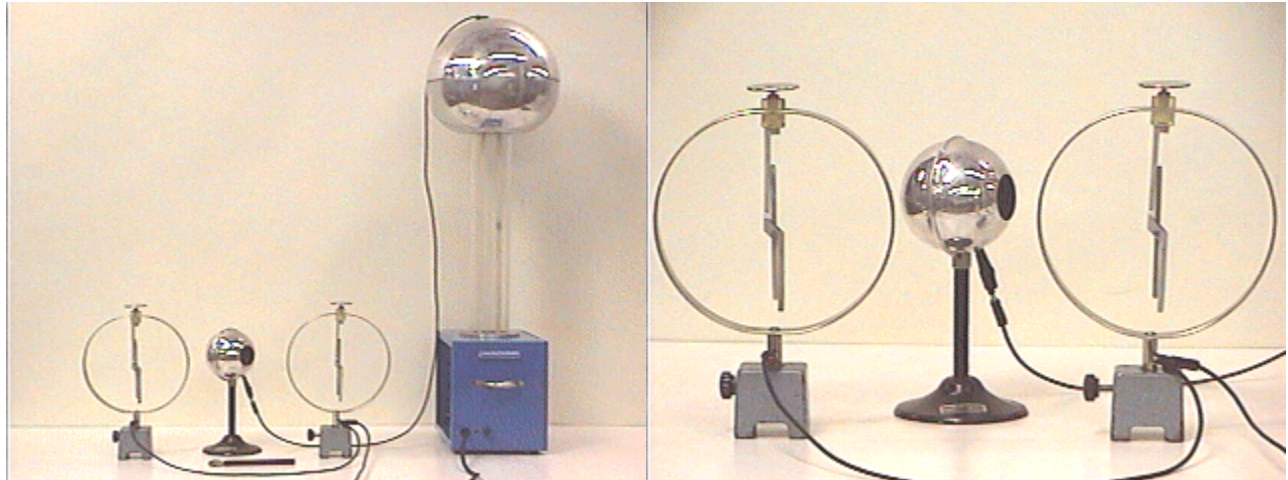


Question #187

The *hollow conducting sphere* shown in the photograph at the left and the detail at the right will be charged by briefly turning on the van de Graaff generator. After the sphere is charged, charge on the *inside* of the sphere will be transferred to the electroscope at the right in the photographs and charge on the *outside* of the sphere will be transferred to the electroscope at the left. The charge will be transferred using the small "paddle" shown at the front of the photograph at the left, as done previously in [Question # 178](#). To transfer charge from the inside of the sphere the paddle will be carefully inserted into the hole to touch the inside surface of the sphere.



The question is where the charge on the hollow conducting sphere will be found, on the inside, the outside, both, or neither.

After charge is transferred from both the inside and the outside of the hollow conducting sphere,

- (a) only the electroscope at the left will show a deflection.
- (b) only the electroscope at the right will show a deflection.
- (c) both electroscopes will show deflections.
- (d) neither electroscope will show a deflection.

Click here for [Answer #187](#) after May 10, 2004.

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For questions and comments regarding the *Question of the Week* contact

[Dr. Richard E. Berg](#) by e-mail or using phone number or regular mail address given on the [Lecture-Demonstration Home Page](#).